

CLAIMS

What is claimed is:

- 1 1. A (meth)acrylate resin comprising:
2 20-85 % by weight (meth)acrylate
3 10-40 % by weight of a polymer soluble in (meth)acrylate
4 0.1-2 % by weight paraffin
5 0-50 % by weight hydroxy(meth)acrylate
6 0.1-2 % by weight adhesion promoter.
- 1 2. The (meth)acrylate resin as claimed in Claim 1, comprising:
2 30-40 % by weight (meth)acrylate
3 25-35 % by weight of a polymer soluble in (meth)acrylate
4 0.5-1 % by weight paraffin
5 5-40 % by weight hydroxy(meth)acrylate
6 0.2-1.0 % by weight adhesion promoter.
- 1 3. The (meth)acrylate resin as claimed in claim 1, characterised in that the (meth)acrylate is
2 methyl methacrylate.
- 1 4. The (meth)acrylate resin as claimed in claim 1, characterised in that the polymer soluble
2 in (meth)acrylate comprises a (meth)acrylate homopolymer and/or a copolymer.
- 1 5. The (meth)acrylate resin as claimed in claim 4, characterised in that the homopolymer is
2 polymethyl methacrylate.
- 1 6. The (meth)acrylate resin as claimed in claim 4, characterised in that the copolymer is a
2 copolymer of methyl methacrylate and butyl methacrylate, methyl methacrylate and ethyl
3 acrylate or vinyl chloride and vinyl acetate.
- 1 7. The (meth)acrylate resin as claimed in claim 5, characterised in that the copolymer is a
2 copolymer of methyl methacrylate and butyl methacrylate, methyl methacrylate and ethyl
3 acrylate or vinyl chloride and vinyl acetate.
- 1 8. The (meth)acrylate resin as claimed in claim 1, characterised in that the
2 hydroxy(meth)acrylate is hydroxyethyl methacrylate.

- 1 9. The (meth)acrylate resin as claimed in claim 1, characterised in that the (meth)acrylate
2 resin further contains 1-10 % by weight cross-linking agent, preferably 1-3 % by weight.
- 1 10. The (meth)acrylate resin as claimed in claim 9, characterised in that the cross-linking
2 agent is ethylene glycol dimethacrylate, 1,4 butanediol dimethacrylate and/or tri-ethylene
3 glycol dimethacrylate.
- 1 11. The (meth)acrylate resin as claimed in claim 1, characterised in that the (meth)acrylate
2 resin further comprises 0.1 to 2 % by weight defoamer, preferably 0.1-1.0 % by weight
3 (based on the (meth)acrylate resin).
- 1 12. The (meth)acrylate resin as claimed in claim 1, characterised in that the (meth)acrylate
2 resin comprises further conventional additives, such as 0.1-2 % by weight co-stabiliser
3 and/or 0.01-0.1 % by weight stabiliser.
- 4 13. The (meth)acrylate resin as claimed in claim 12, characterised in that the (meth)acrylate
5 resin comprises 0.02 to 0.07 % by weight stabiliser and/or 0.5-1.0 % by weight co-
6 stabiliser.
- 1 14. The (meth)acrylate resin as claimed in claim 12, characterised in that the stabiliser is 2,6
2 di-tert butyl-4-methyl phenol and the co-stabiliser is tri-(2,4 di-tert. butyl
3 phenyl)phosphite.
- 1 15. The (meth)acrylate resin as claimed in claim 13, characterised in that the stabiliser is 2,6
2 di-tert butyl-4-methyl phenol and the co-stabiliser is tri-(2,4 di-tert. butyl
3 phenyl)phosphite.
- 1 16. The (meth)acrylate resin as claimed in claim 1, characterised in that the (meth)acrylate
2 resin further comprises 0.1-1.5 % by weight, preferably 0.4-0.8 % by weight, accelerator
3 and 0.1-5 % by weight, preferably 2-4 % by weight initiator.
- 1 17. The (meth)acrylate resin as claimed in claim 16, characterised in that the accelerator is
2 methyl hydroxyethyl paratoluidine, dimethyl paratoluidine, dihydroxyethyl paratoluidine
3 or dihydroxypropyl paratoluidine and/or that the initiator is benzoyl peroxide.
- 1 18. The (meth)acrylate resin as claimed in claim 1, characterised in that the paraffin
2 comprises a mixture of different paraffins with different softening points, especially
3 paraffins with a softening point between 46 and 48° C, paraffins with a softening point
4 between 52 and 54° C and paraffins with a softening point between 63 and 66° C.

- 1 19. The (meth)acrylate resin as claimed in claim 1, characterised in that the adhesion
2 promoter is a phosphoric ester, especially methacryloyl oxyethyl phosphate.
- 1 20. The (meth)acrylate resin as claimed in claim 1, characterised in that the viscosity of the
2 (meth)acrylate resin before curing is at least 250 mPa/s at $D = 1,000 \text{ 1/s}$ or at least 300
3 mPa/s at $D = 100 \text{ 1/s}$.
- 1 21. The (meth)acrylate resin as claimed in claim 1, characterised in that colorants, such as
2 colour pigments or a dye paste, are also added to the (meth)acrylate resin.
- 1 22. A method of repairing a pipe utilizing the (meth)acrylate resin of claim 1 wherein the
2 method comprises applying the resin to the pipe to seal an opening.
- 1 23. The method of claim 22, characterised in that the pipe comprises material from one of the
2 group consisting of stoneware, concrete and plastic.
- 1 24. The method of claim 22 wherein the pipe is a sewer pipe.
- 1 25. The method of claim 23 wherein the pipe comprises polyvinyl chloride.